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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/056,830	01/24/2002	Shibin Jiang	NP-0009	3411
30343	7590	05/07/2004	EXAMINER	
NP PHOTONICS, INC. 9030 SOUTH RITA ROAD SUITE 120 TUCSON, AZ 85747			NGUYEN, DUNG T	
			ART UNIT	PAPER NUMBER
			2828	

DATE MAILED: 05/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/056,830

Applicant(s)

JIANG ET AL.

Examiner

Dung (Michael) T Nguyen

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-32 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayden et al. (US6430349) in view of Ahmad et al. (US2003/0049003).

With respect to claims 1-3, 5-6, 10-15, 17-19, 21-22, and 24-32, Hayden show in Fig.1-2 a fiber laser, comprising: a section of fiber including; a core formed from the phosphate glass host co- doped with 0.5-5.0 wt.% Er₂O₃ and 0.5-30 wt. % Yb₂O₃ (col.2, 1.66); first and second telecom fibers formed from a silica glass and fusion spliced to opposite ends of the linear section of fiber; at least one

wavelength-selective reflector (fiber Bragg grating) (col.13, l.1-45) having a characteristic linewidth, said reflector at least partially defining an optical resonant cavity of 5cm or less (col.4, l.20-21) that includes the section of fiber; and a source of pump radiation that illuminates the fiber to excite erbium and ytterbium ions in the Er_2O_3 and Yb_2O_3 co-doped core and provide gain; the length of said cavity producing a mode spacing that is sufficiently wide with respect to the wavelength-selective reflector's linewidth so that the erbium lases at a single longitudinal mode and said fiber outputs a single- mode signal. Hayden lack a cladding formed from a phosphate glass host including P_2O_5 from 30 to 80 wt. %, L_2O_3 from 5 to 30 wt. %, MO from 5 to 30 wt. %. Ahmad teach a cladding 720 (Fig.18) formed from a phosphate glass host including P_2O_5 from 30 to 80 wt. %, L_2O_3 from 5 to 30 wt. %, MO from 5 to 30 wt. % (page 3, para. 0040). For the benefit of manufacturing a fiber laser, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Hayden a cladding formed from a phosphate glass host including P_2O_5 from 30 to 80 wt. %, L_2O_3 from 5 to 30 wt. %, MO from 5 to 30 wt. % as taught by Ahmad.

With respect to claims 4, 7, 16, 20, and 23, Hayden disclose the fiber laser output power is more than 50mW (claim 9).

With respect to claim 8, Hayden disclose the slope efficiency of at least 30% (col.27, l.64-65).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayden et al. (US6430349) in view of Ahmad et al. (US2003/0049003) and further in view of Fernald et al. (US6229827). Hayden and Ahmad disclose all limitations of the claim except for the fiber core has a rectangular cross section. Fernald teach the fiber core has a rectangular cross section (col.4, l.14). For the benefit of imparting a single polarization on the single mode signal, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Hayden and Ahmad the fiber core has a rectangular cross section as taught by Fernald.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Communication Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung (Michael) T Nguyen whose telephone number is (571) 272-1949. The examiner can normally be reached on 8:30 - 17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3329.

Michael Dung Nguyen



Don Wong
Supervisory Patent Examiner
Technology Center 2800